Doc ID: Note:1036728.6
Subject: ORA-00018 & ORA-00604 WHEN MAKING NEW CONNECTIONS TO THE DATABASE
Type: PROBLEM
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Problem Description:
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You receive the following errors when trying to make new connections:

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    ORA-00604: error occurred at recursive SQL level 1
        Cause: An error occurred while processing a recursive SQL statement.
               A recursive SQL statement is one that applies to internal
               dictionary tables.
       Action: If the situation described in the next message on the stack can
               be corrected, do so; otherwise, contact customer support.

    ORA-00018: maximum number of sessions exceeded
        Cause: An operation requested a resource that was unavailable.
               The maximum number of sessions is specified by the
               initialization parameter SESSIONS.
               When this maximum is reached, no more requests are processed.
       Action: Try the operation again in a few minutes.
               If this message occurs often, shut down Oracle, increase the
               SESSIONS parameter in the initialization parameter file, and
               restart Oracle.
```

NOTE: No new connections are permitted to the database.

Selecting count(*) from V$SESSION returns a value that is less than the current setting of the SESSIONS parameter which is either derived (default) or specifically set in the "init<SID>.ora".

Problem Explanations:
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You hit the maximum number of sessions in the database.

Search Words:
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ora-604
ora-18

Solution: INCREASE VALUE OF SESSIONS PARAMETER IN "INIT.ORA" FILE

Solution Description:
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You need to increase the value of the SESSIONS parameter in the "init<SID>.ora" file.

-or-

Increase the value of PROCESSES since SESSIONS is derived off of the PROCESSES parameter.

S SIONS: derived (1.1 * PROCESSES + 5)

Solution Explanation:
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SESSIONS specifies the total number of user and system sessions. The default number is greater than PROCESSES to allow for recursive sessions.

Bug:480599 and bug:456884 document this behavior. The difference between what V$SESSION shows and the actual number of connections is documented in bug:480599. "There is a delay between freeing up and cleaning out the sessions. Hence you see this inconsistent image on V$SESSIONS."

References:
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Oracle7 Reference manual pg 1-63.

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